XRF Soil Analyzer

Brand **Master Science** | Unit **Pc**



The MSCompass200SWISS Portable XRF Soil Analyzer is a powerful field lab designed for rapid, non-destructive elemental analysis of soil. With a bench-top design for enhanced precision, this analyzer is simple to operate with minimal training and is ideal for in-situ soil testing.

KEY HIGHLIGHTS

- Portable, Field-Ready Lab
- Non-destructive Testing
- Easy Operation
- Minimal Sample Prep
- Advanced Software

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Overview

It uses X-ray fluorescence spectrometry to detect heavy metals and other elements, making it suitable for environmental, agricultural, and construction applications.

Key Features

Portable, Field-Ready Lab
Conduct elemental analysis anywhere with minimal preparation.

Non-destructive Testing
Accurate and consistent results in minutes.

Easy Operation
Load-and-start functionality requires little operator training.

ENSURES PRECISION AND REPEATABILITY IN TEST PERFORMANCE.

Minimal Sample Prep
Suitable for in-situ soil screening and site remediation.

Advanced Software
Uses fundamental parameters (FP) algorithms and empirical calibrations for traceable, accurate results.

Data Management
Multiple data transport options including USB, Wi-Fi, Bluetooth, and GPS, with no need for a PC.

Soil Contaminants Detected
The Compass 200 can detect a range of heavy metals including vanadium (V), chromium (Cr), cobalt (Co), nickel (Ni), copper (Cu), zinc (Zn), arsenic (As), lead (Pb), and cadmium (Cd). Its performance has been validated with soil standard samples, providing highly precise results with little deviation.

Precision and Performance

The analyzer offers high precision with repeatability for elements like Ni, Cu, Zn, Pb, and As, as demonstrated in test results with relative standard deviations (RSD) as low as 0.7%.

Conclusion

The MSCompass200SWISS Portable XRF Soil Analyzer is an efficient and reliable tool for on-site quantitative analysis of soil elements. Its high detector resolution, coupled with advanced software and calibration models, provides accurate analysis for environmental, agricultural, and industrial needs, especially for heavy metals in contaminated lands.

Technical Specifications

PARAMETER	SPECIFICATION
DetectorHigh-resolution silicon detector.	
Excitation Source4-watt high-efficiency micro X-ray tube (50 kV max, 200 µA max).	
Working Temperature-20°C to 50°C.	
Measuring Time per Sample30-200 seconds.	
Element RangeMagnesium (Mg) to Uranium (U).	
Sample TypesLiquid, powders, solids.	
Factory CalibrationMetals in soil.	
Instrument Dimensions270mm x 320mm x 230mm (LWH).	
Sample Chamber Dimensions170mm x 110mm x 17mm (LWH).	
Weight9.4 kg.	
Display8-inch touch screen (1280x800) running on Windows 10.	
External ConnectionsUSB, Bluetooth, Wi-Fi, GPS.	
Test Report OutputExcel and PDF formats.	

Applications

- **In-situ soil surveys and environmental assessments.**
- **Detection of hazardous metals in contaminated land.**
- **Site remediation validation.**
- **Testing of Pt, Pd, and Rh in catalysts.**
- Consumer goods testing (e.g., Pb and Cd in toys, jewelry, packaging).